167. A fiber optic installation according to Claim 166 further comprising a cable inserted into the duct via the slot, said cable comprising a tube and said at least one optical waveguide disposed ~~within said tube.~~

168. A fiber optic installation according to Claim 161 wherein said filling material is selected from the group consisting of bitumen and a hot melt adhesive.

REMARKS

This Preliminary Amendment is submitted to insert a cross-reference to the parent application, introduce section headings as suggested in the parent application, introduce a new set of claims and change the title to be more reflective of the new set of claims. As such, entry of the Preliminary Amendment prior to calculation of the filing fees and prior to examination is requested.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Box Patent Application, Commissioner for Patents, Washington, DC 20231.

Gwen Frickhoeffer

Version With Markings to Show Changes Made:

In The Title:

Please delete the title "Process for introducing an optical cable into solid ground" and insert -- FIBER OPTIC INSTALLATION -- therefor.

In The Specification:

Please add the following paragraph on page 1, following the title and between lines 3 and 4:

-- CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Application No. 09/068,286, filed May 6, 1998, which is hereby incorporated herein in its entirety by reference.

FIELD OF THE INVENTION --

Page 1, between lines 6 and 7, please insert:

-- BACKGROUND OF THE INVENTION --

Page 2, between lines 3 and 4, please insert:

-- SUMMARY OF THE INVENTION --

Page 9, between lines 32 and 33, please insert:

-- BRIEF DESCRIPTION OF THE DRAWINGS --

Page 14, between lines 14 and 15, please insert:

-- DETAILED DESCRIPTION OF THE INVENTION --

In The Claims:

Please cancel original Claims 1-122 and add new Claims 123-168 as follows:

123. (Newly Added) A fiber optic cable installation comprising:

a surface defining a channel having a width of no more than 12 mm;

a cable disposed within the channel, said cable comprising a tube sized to fit within the channel and at least one optical waveguide disposed within said tube; and

a filling material overlying said cable and at least partially filling the channel, said filling material at least partially comprised of material not previously evacuated to form the channel.

124. (Newly Added) A fiber optic cable installation according to Claim 123 wherein said cable has a diameter of no more than 10 mm.

125. (Newly Added) A fiber optic cable installation according to Claim 123 wherein said surface defines the channel to have a width of no more than 7 mm.

126. (Newly Added) A fiber optic cable installation according to Claim 125 wherein said cable has a diameter of no more than 5.5 mm.

127. (Newly Added) A fiber optic cable installation according to Claim 123 wherein the surface defines the channel to have a depth of no more than 15 mm.

128. (Newly Added) A fiber optic cable installation according to Claim 123 wherein said surface comprises a road surface.

129. (Newly Added) A fiber optic cable installation according to Claim 128 wherein the road surface comprises a base course, a binder course disposed upon said base course and a surface course disposed upon said binder course, and wherein the road surface defines the channel through the surface course and the binder course and at least partially through the base course.

130. (Newly Added) A fiber optic cable installation according to Claim 123 wherein said surface comprises a paved surface defining at least one expansion joint which serves as the channel.

131. (Newly Added) A fiber optic cable installation according to Claim 123 further comprising a release element disposed within the channel and extending lengthwise along said cable, said filling material also overlying said release element.

132. (Newly Added) A fiber optic cable installation according to Claim 131 wherein said release element is formed of a material selected from the group consisting of metal, plastic and foam rubber.

133. (Newly Added) A fiber optic cable installation according to Claim 131 wherein said release element is formed of a core surrounded by an elastic coating.

134. (Newly Added) A fiber optic cable installation according to Claim 133 wherein the core of said release element is at least as large as said cable.

135. (Newly Added) A fiber optic cable installation according to Claim 123 further comprising an intermediate covering disposed within the channel and overlying said cable, said filling material also overlying said intermediate covering.

136. (Newly Added) A fiber optic cable installation according to Claim 135 wherein said intermediate covering comprises at least one insert selected from the group consisting of wires and sensors.

137. (Newly Added) A fiber optic cable installation according to Claim 123 wherein said filling material is formed of a material selected from the group consisting of bitumen and a hot melt adhesive.

138. (Newly Added) A fiber optic cable installation according to Claim 123 wherein said filling material includes a marker.

139. (Newly Added) A fiber optic cable installation according to Claim 138 wherein the marker includes fibers selected from the group consisting of glass fibers and metal fibers.

140. (Newly Added) fiber optic cable installation according to Claim 123 further comprising at least one magnet disposed within the channel, said filling material also overlying said at least one magnet.

141. (Newly Added) A fiber optic cable installation according to Claim 123 further comprising a device, disposed within the channel between said cable and said filling material, for holding said cable within the channel.

142. (Newly Added) A fiber optic cable installation according to Claim 123 further comprising a foam at least partially surrounding said cable, said filling material also overlying said foam.

143. (Newly Added) A fiber optic cable installation according to Claim 123 further comprising a conductive cable disposed within the channel, said filling material also overlying said conductive cable.

144. (Newly Added) A fiber optic cable installation comprising:

a surface defining a channel;

a cable disposed within the channel, said cable comprising a tube and at least one optical waveguide disposed within said tube;

a release element disposed within the channel and extending lengthwise along said cable; and

a filling material overlying said cable and said release element and at least partially filling the channel.

145. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said release element is formed of a material selected from the group consisting of metal, plastic and foam rubber.

146. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said release element is formed of a core surrounded by an elastic coating.

147. (Newly Added) A fiber optic cable installation according to Claim 146 wherein the core of said release element is at least as large as said cable.

148. (Newly Added) A fiber optic cable installation according to Claim 144 further comprising an intermediate covering disposed within the channel between said cable and said release element.

149. (Newly Added) A fiber optic cable installation according to Claim 148 wherein said intermediate covering comprises at least one insert selected from the group consisting of wires and sensors.

150. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said surface defines the channel to have a width of no more than 12 mm.

151. (Newly Added) A fiber optic cable installation according to Claim 150 wherein said cable has a diameter of no more than 10 mm.

152. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said surface defines the channel to have a width of no more than 7 mm.

153. (Newly Added) A fiber optic cable installation according to Claim 152 wherein said cable has a diameter of no more than 5.5 mm.

154. (Newly Added) A fiber optic cable installation according to Claim 144 wherein the surface defines the channel to have a depth of no more than 15 mm.

155. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said surface comprises a road surface.

156. (Newly Added) A fiber optic cable installation according to Claim 155 wherein the road surface comprises a base course, a binder course disposed upon said base course and a surface course disposed upon said binder course, and wherein the road surface defines the channel through the surface course and the binder course and at least partially through the base course.

157. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said surface comprises a paved surface defining at least one expansion joint which serves as the channel.

158. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said filling material is formed of a material selected from the group consisting of bitumen and a hot melt adhesive.

159. (Newly Added) A fiber optic cable installation according to Claim 144 wherein said filling material includes a marker.

160. (Newly Added) A fiber optic cable installation according to Claim 155 wherein the marker includes fibers selected from the group consisting of glass fibers and metal fibers.

161. (Newly Added) A fiber optic installation comprising:

an elongate body defining at least one lengthwise extending duct and adapted to be disposed within a channel defined by a surface;

at least one optical waveguide disposed within a respective duct defined by said elongate body; and

a filling material overlying said elongate body and at least partially filling the channel.

162. (Newly Added) A fiber optic installation according to Claim 161 wherein said elongate body is sized to fit within a channel having a width of no more than 12 mm.

163. (Newly Added) A fiber optic installation according to Claim 161 wherein said elongate body is sized to fit within a channel having a width of no more than 7 mm.

164. (Newly Added) A fiber optic installation according to Claim 161 wherein said elongate body comprises a plurality of barbs for engaging walls that define the channel.

165. (Newly Added) A fiber optic installation according to Claim 161 wherein said elongate body is sheathed by said filling material.

166. (Newly Added) A fiber optic installation according to Claim 161 wherein said elongate body defines a slot opening into a duct.

167. (Newly Added) A fiber optic installation according to Claim 166 further comprising a cable inserted into the duct via the slot, said cable comprising a tube and said at least one optical waveguide disposed within said tube.

168. (Newly Added) A fiber optic installation according to Claim 161 wherein said filling material is selected from the group consisting of bitumen and a hot melt adhesive.